Georgia System Operations Corporation, Inc.

Energy Management Infrastructure Project

Abstract

The Georgia System Operations Corporation, Inc.'s (GSOC) Energy Management Infrastructure project involves upgrades to the transmission operations communications and control system, along with new analysis tools for grid operators. GSOC is upgrading the software and hardware platform for their energy control system, which is used to manage the operation of their transmission system and the dispatch of generation resources. Advanced analysis software is also being implemented for improved monitoring, planning, and electricity cost analysis. GSOC expects enhanced transmission planning to reduce the need for ancillary services. GSOC also expects greater accuracy in allocating costs for transmission services. Reductions in generation costs are expected as a result of more efficient dispatch of resources.

Smart Grid Features

Communications infrastructure includes wide-area monitoring, visualization, and control systems that enable GSOC to rapidly analyze operations across its entire transmission system. More powerful computing hardware, communications, and software support more accurate and rapid delivery of transmission information to GSOC and its member cooperatives. Improved monitoring is intended to improve grid reliability, generation dispatch, and electricity pricing accuracy.

Through the project, GSOC is implementing ***advanced transmission applications*** including:

- **Post-mortem analysis** enables power system engineers and grid operators to analyze disturbances and large-scale system events, to better understand their causes and to improve future system models and operations.
- **Thermal overload monitoring** provides grid operators and engineers with detailed information about thermal conditions of the transmission grid.
- **Improved state estimation** addresses parts of the transmission grid that lack physical monitoring to improve accuracy of power systems models for planning and operations.
- **Steady-state model benchmarking** increases the accuracy of power systems models for planning and operations.

At-A-Glance

Recipient: Georgia System Operations Corporation, Inc.

State: Georgia

NERC Region: SERC Reliability Corporation

Total Budget: $12,913,003

Federal Share: $6,456,501

Project Type: Electric Transmission Systems

Equipment

- Transmission Systems Communication Equipment

Advanced Transmission Applications

- Post-Mortem Analysis
- Thermal Overload Monitoring
- Improved State Estimation
- Steady-State Model Benchmarking

Key Targeted Benefits

- Improved Electric Service Reliability and Power Quality
- Optimized Generator Operation
- Reduced Ancillary Service Cost
- Reduced Electricity Costs for Customers
- Reduced Greenhouse Gas and Criteria Pollutant Emissions
- Reduced Wide-Scale Blackouts

Georgia System Operations Corporation, Inc. *(continued)*

Timeline

Key Milestones	Target Dates
Transmission control platform upgrade start	Q1 2010
Transmission control platform upgrade complete	Q4 2012

Contact Information

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